MEETING TODAY’S CHALLENGES TO PROVIDE A SECURE FUTURE

Specifically designed for commercial applications, the U3510 LCC is the market’s lightest, most compact thermal imaging detector to offer a resolution of 320 x 240 pixels. Just 1.83 x 1.83 x 0.37 cm in size, the low-cost U3510 LCC weighs less than 4 grams.

With a 25 micron pixel pitch, this uncooled sensor employs vanadium-oxide technology to detect long-wave infrared energy through adverse atmospheric conditions and total darkness to display crystal-clear thermal video images. The U3510 LCC features a low-profile, surface-mountable ceramic leadless chip carrier (LCC) that can be mounted to any printed circuit board using LCC sockets.

Its compact size, light weight and powerful thermal imaging capabilities make the U3510 LCC a leading choice for commercial security, detection and monitoring products.

- Designed for commercial applications
- Low-profile, surface-mountable, ceramic leadless chip carrier
- Smallest, lightest detector providing resolution of 320 x 240 pixels
- Measures just 1.83 x 1.83 x 0.37 cm
- Uncooled, vanadium-oxide, 25 micron pixel pitch detector
# System Features

## Highlights Head

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector Type</td>
<td>Uncooled VOx Microbolometer</td>
</tr>
<tr>
<td>Array Size</td>
<td>320 x 240</td>
</tr>
<tr>
<td>Detector Pitch</td>
<td>25 μm</td>
</tr>
<tr>
<td>Spectral Response</td>
<td>LWIR 8 - 14 μm</td>
</tr>
</tbody>
</table>

## Video

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame Rate</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Nominal Data Rate</td>
<td>6.25 MHz</td>
</tr>
<tr>
<td>Format</td>
<td>NTSC/PAL Compatible</td>
</tr>
</tbody>
</table>

## Electrical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>≤ 300 mW Nominal</td>
</tr>
</tbody>
</table>

## Part Number

| Part Number              | 1013510-001   |

## Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity (NETD)</td>
<td>&lt;40 mK @ F/1</td>
</tr>
<tr>
<td>Multiplexer</td>
<td>CMOS Ripple Integration</td>
</tr>
<tr>
<td>Area Fill Factor</td>
<td>90%</td>
</tr>
<tr>
<td>Typical Operability</td>
<td>&gt;99%</td>
</tr>
<tr>
<td>Number of Analog Outputs</td>
<td>1</td>
</tr>
<tr>
<td>Output Voltage Range</td>
<td>0.5 - 4.5 V</td>
</tr>
<tr>
<td>Time Constant</td>
<td>≤ 18 msec</td>
</tr>
<tr>
<td>Temperature Stabilization</td>
<td>No TEC required</td>
</tr>
<tr>
<td>On-chip Non Uniformity Correction (NUC)</td>
<td>6 bits parallel</td>
</tr>
</tbody>
</table>

## Mechanical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (L x W x H)</td>
<td>1.83 x 1.83 x 0.37 cm</td>
</tr>
<tr>
<td></td>
<td>(0.72 x 0.72 x 0.145 inches)</td>
</tr>
<tr>
<td>Weight</td>
<td>≤ 4 g</td>
</tr>
</tbody>
</table>

## Environmental

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +71°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-46°C to +85°C</td>
</tr>
</tbody>
</table>

* Specifications subject to change without notice. Specifications subject to change without notice. The products described herein are subject to US Government Export Controls.